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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,687	07/14/2005	Richard David Saunders	UDL27.001APC	8588
29995 7590 06/23/2011 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614				
EXAMINER ZHANG, RACHEL L				
ART UNIT		PAPER NUMBER		
1721				
NOTIFICATION DATE		DELIVERY MODE		
06/23/2011		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com  
efiling@kmob.com  
eOAPilot@kmob.com

### Office Action Summary

**Application No.**

10/539,687

**Applicant(s)**

SAUNDERS ET AL.

**Examiner**

RACHEL ZHANG

**Art Unit**

1721

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 May 2011.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10,14-18 and 21-33 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 10,14-18 and 21-33 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-945)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/18/2011 has been entered.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10, 14-15, 17-18 and 21-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. It is noted that claims 10, 14-15, 17-18, and 21-22 are recited as a "system" which does not clearly set forth which statutory category the invention belongs. It has been determined that the claims are directed an apparatus and the appropriate principles for interpreting claims for that particular category of invention have been applied.

***Claim Interpretations***

5. Claim 10 recites the limitation "a printable substrate...wherein the printable substrate carries a complementary reactant...". "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, "[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." In re Young, 75 F.2d 996, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)). The printable substrate is a material worked upon by the apparatus, and therefore the printable substrate, which comprises the complimentary reactant, is not a patentable limitation to the apparatus claims.

Claims 14, 15, 17, 18, 21 and 22 include limitations only to the printable substrate, and are therefore not further limiting.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by WO 00/78556 (Dukler).

Dukler discloses a method of printing on documents a visible or invisible image (page 3, paragraph 5), wherein the method includes a liquid toner (page 4, paragraph 1), which is used in a digital printing process (page 4, paragraph 5). The toner may produce multiple combinations of markers (page 6, paragraph 3). The labeling dyes may comprise rhodamine dyes as the luminescent material (page 5, paragraph 4 - page 6, paragraph 1). The dye may produce a halo superimposed with the original image (page 9, paragraph 2).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 16, 23-30, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/78556 (Dukler) in view of US Patent 4148968 (Nagashima).

Dukler discloses a method of printing on documents a visible or invisible image (page 3, paragraph 5), wherein the method includes a liquid toner (page 4, paragraph 1), which is used in a digital printing process (page 4, paragraph 5). The toner may produce multiple combinations of markers (page 6, paragraph 3). The labeling dyes may comprise rhodamine dyes as the luminescent material (page 5, paragraph 4 - page

6, paragraph 1). The dye may produce a halo superimposed with the original image (page 9, paragraph 2). Dukler fails to disclose a chemical reactant in the substrate.

Nagashima discloses an electrophotographic methods which comprises developing a latent image with a charged toner particle containing a color forming agent (A) to a image receiving sheet containing a color forming agent (B) and heating to cause a thermal color forming reaction between the color forming agents (column 3, lines 42-53). The color forming agent (B) may be a phenol polymer (column 2, lines 62-68). The toner may comprise a rhodamine dye (column 32, lines 65-67). The method may form a toner image which is completely fixed and can be obtained without any waiting time (column 2, lines 9-13).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the chemical reaction of Nagashima for one of the image layers of Dukler so that the image is completely fixed and is obtained with no waiting time.

10. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/78556 (Dukler) in view of US Patent 4148968 (Nagashima) as applied to claims 9 and 16 above, and further in view of US PGPub 2003/0068575 (Yanaka).

Dukler and Nagashima disclose the method as discussed above, wherein the dye may be a Rhodamine B (Dukler, page 5, paragraph 4 - page 6, paragraph 1), but fail to teach the use of the specific dyes. Yanaka discloses a toner which uses leuco dyes, which may be Rhodamine B or 3,3-bis(p-dimethylaminophenyl)-6-dimethylaminophthalide (PP 0013). It would have been obvious to one of ordinary skill

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in the art at the time of invention to use the 3,3-bis(p-dimethylaminophenyl)-6-dimethylaminophthalide of Yanaka for the Rhodamine B of Dukler and Nagashima because Yanaka teaches that they are functionally equivalent. The substitution of known equivalent structures involves only ordinary skill in the art. *In re Fout* 213 USPQ 532 (CCPA 1982); *In re Susi* 169 USPQ 423 (CCPA 1971); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *In re Ruff* 118 USPQ 343 (CCPA 1958). When a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.

### ***Response to Arguments***

11. Applicant's arguments, see pages 7-8, filed 05/04/2011, with respect to the rejection(s) of claim(s) 10, 14, 15, 17, 18, 21, and 22 under Dukler and Nagashima have been fully considered and are persuasive in view of the amendments to the claims. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made as discussed above.

12. Applicant's arguments filed 05/04/2011, with respect to the rejection(s) of claim(s) 116, 23-33 under Dukler and Nagashima, have been fully considered but they are not persuasive.

Applicant argues that an alteration using plain ink after removal of the original image in Dukler might result in the security feature being different than the visible image.

The examiner agrees, however, Dukler is not relied upon for the security feature of the instant application. Nagashima is being relied upon for an image which is retained within the substrate, which would not be altered even if other toner images on the surface would be removed.

Applicant argues that Nagashima fails to disclose a security feature. The examiner respectfully disagrees. Nagashima discloses a method wherein an image is retained in the substrate through a reaction between two color forming agents. The "security feature" of instant claim 16 is merely required to be a reaction of a reactant in the toner and a complementary reactant in the substrate, in which the retained security feature remains identical to the toner image. The reaction of the two components of Nagashima would result in identical images if used in a multi-image method, such as that of Dukler.

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RACHEL ZHANG whose telephone number is (571)272-9802. The examiner can normally be reached on Mon-Fri: 8:30-5:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher RoDee/  
Primary Examiner, Art Unit 1721

RLZ